Burien
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AIRCRAFT NOISE REDUCTION REQUIREMENTS

This informational handout is a summary of the City of Burien Aircraft Noise Reduction Ordinance as described in the Burien Municipal Code (BMC) Chapter 15.12.

The City of Burien is divided into three aircraft noise reduction areas:

- Area 1: Those portions of the City, east of First Avenue South extending from the northern to the southern City limits and to the eastern city limits are a 35 dB Reduction Area. All living and working areas must comply with 15.12.90 BMC which is designed to achieve a noise reduction level of 35 dB.
- Area 2: Those portions of the City, between First Avenue South and 12th Avenue S.W. extending from the northern to the southern City limits are a 30 dB Reduction Area. All living and working areas must comply with 15.12.100 BMC which is designed to achieve a noise reduction level of 30 dB.
- Area 3: All remaining portions of the City are a 25 dB Reduction Area. All living and working areas must comply with 15.12.110 BMC which is designed to achieve a noise reduction level of 25 dB.

These provisions apply to all buildings or structures constructed or placed in use for human occupancy on sites within the City of Burien.
Exceptions:

(a) Additions under 500 square feet that are not used for sleeping rooms; and
(b) Remodels with a building department valuation less than $16,800.

Note: New glazing in exempted additions and remodels must conform to the provisions of the Washington State Energy Code.

Additions may be made to existing buildings or structures without making the entire building or structure comply with all the requirements of this chapter for new construction. Additions on existing buildings shall be made to comply in the areas being added to the extent that it is deemed practical and effective by the building official..

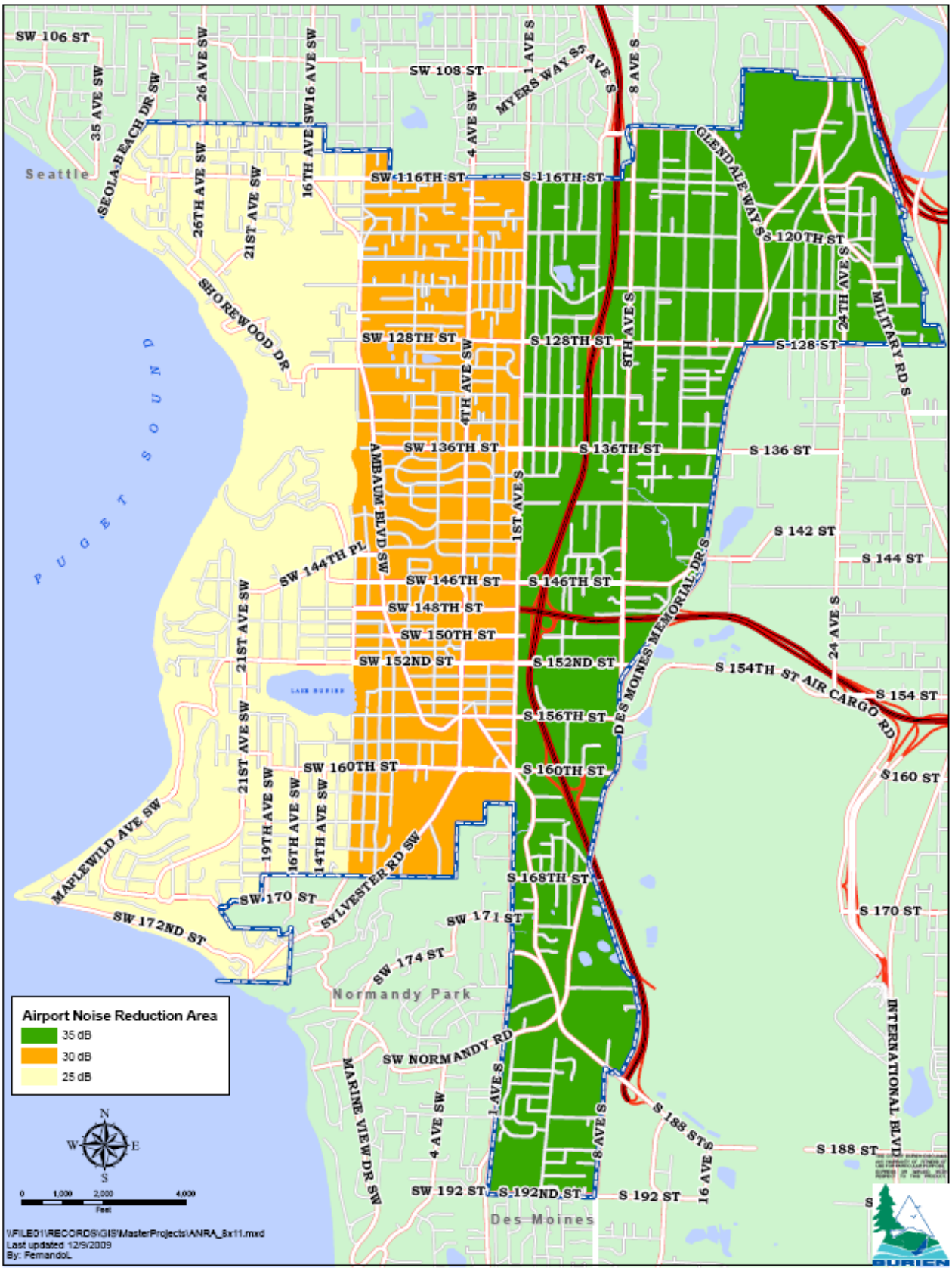
A change in use or occupancy, or structures, or use of a building previously unapproved for human occupancy to human occupancy use, or of one previously unused for sleeping purposes to sleeping use shall not be permitted unless the building or structure complies with the Aircraft Noise Reduction requirements of 15.12 BMC.

The plans and specifications shall show in sufficient detail all pertinent data and features of the building and the equipment and systems, including, but not limited to: exterior envelope component materials; STC ratings of applicable component assemblies; R-values of applicable insulation materials; size and type of apparatus and equipment; equipment and system controls and other pertinent data to indicate conformance with the Aircraft Noise Reduction requirements.

AIRPORT NOISE REDUCTION - Minimum design requirements	**Zone 1 35 dB**	**Zone 2 30 dB**	**Zone 3 25 dB**
EXTERIOR WALLS			
Exterior walls, other than as described in this section shall have a laboratory sound transmission class rating of at least STC [ ] **OR;** comply with following options:	**40**	**35**	**30**
1. Masonry walls having a weight of at least [ ] pounds per square foot, do not require a furred (stud) interior wall. At least one surface of the concrete block walls shall be plastered.	**75**	**40**	**25**
2. Stud walls shall be at least four inches (4") in nominal depth and shall be finished on the outside with solid sheathing under an approved exterior wall finish. (Due to energy code requirements, a 2" X 6" wall would be appropriate in order to install R-21 insulation as required by the Washington State Energy code.)	✔	✔	✔
2.1. Continuous composition board, plywood, O. S. B. board or gypsum board sheathing at least [ ] inch thick shall cover the exterior side of the wall studs.The thickness of the exterior sheathing includes the thickness of the subsheathing only. The thickness of the exterior wall finish (or siding) is not included.	**1**	**3/4**	**1/2**
2.2. Sheathing panels shall be butted tightly and covered on the exterior with an approved building wrap. Building paper must be overlapping.	✔	✔	✔
2.3. Insulation material of a type approved by the Building Official, (listed), and rated not less than R- 13 for non-residential structures and R-21 for Residential structures shall be installed continuously throughout the cavity space behind the exterior sheathing and between wall studs.	✔	✔	✔
2.4. The interior surface of the exterior walls shall be of gypsum board or plaster at least five-eighths (5/8") thick, installed on the studs. The gypsum board or plaster may be fastened rigidly to the studs if the exterior is brick veneer or stucco. If the exterior wall finish is siding on sheathing, the interior gypsum board or plaster shall be fastened resiliently to the studs or double thickness must be used.	✔	✔	✔
ROOFS & CEILINGS			
Combined roof and ceiling construction on other than as described in this section and the section on ceilings shall have a laboratory sound transmission class of STC [ ] **OR;** comply with following options:	**49**	**44**	**39**
1. With an attic or rafter space at least six inches (6") deep, and with a ceiling below, the roof shall consist of [ ] inch composition board, plywood or gypsum board sheathing topped with an approved roofing material.	**1**	**3/4**	**1/2**
1.1 Gypsum board or plaster ceilings at least [ ] inch thick shall be provided on the ceiling. Ceilings shall be substantially airtight with a minimum of penetrations.	**5/8**	**5/8**	**1/2**
1.2 Ceiling panels to be mounted on resilient clips or channels, or; panel layers doubled.	✔	n/a	n/a
1.3 Insulation material of a type approved by the building official, (listed), and rated not less than R-38 shall be provided above the ceiling between joist.	✔	✔	✔
2. Open beam construction shall follow the energy insulation standard method for batt insulation, and be provided with [ ] inch plywood roof decking under a suitable roofing material.	**1**	**1**	**1**
3. Composition board shall mean asphaltic impregnated board or an approved sound board.	✔	✔	✔
4. Window or dome skylights shall have a laboratory sound transmission class rating of at least STC [ ]. Skylight assemblies that consist of 1/4" tempered glass, 1/2" air space and a laminated panel consisting of 1/8" tempered glass, .03" (three mils) laminate and 1/8" tempered glass will be accepted in lieu of the tested assembly.	**38**	**33**	**33**

AIRPORT NOISE REDUCTION - Minimum design requirements	**Zone 1 35 dB**	**Zone 2 30 dB**	**Zone 3 25 dB**
FLOORS			
The floor of the lowest occupied rooms shall be slab on fill or below grade, over a fully enclosed basement or crawl space. All door and window openings in a fully enclosed basement shall be tightly fitted.	✔	✔	n/a
EXTERIOR WINDOWS			
Windows other than as described in this section shall have a laboratory sound transmission class rating of at least STC_____ **OR;** comply with following options:	38	33	28
1. Windows shall be double-glazed with panes at least _____ Inch thick. Panes of glass shall be separated by a minimum one-half inch (1/2") airspace,	3/16	1/8	1/8
1.1 and shall not be equal in thickness.	✔	✔	n/a
2. Double glazed windows shall employ fixed sash or efficiently weather-stripped, operable sash. The sash shall be rigid and weather-stripped with material that is compressed airtight when the window is closed so as to conform to an air infiltration test not to exceed one-half (1/2) cubic foot per minute per foot of crack length in accordance with ASTM E-283-65-T.	✔	✔	✔
3. Glass shall be sealed in an air-tight manner with a non-hardening sealant or a soft elastomer gasket or gasket tape.	✔	✔	✔
4. The perimeter of the window frames shall be sealed air-tight to the exterior wall construction with a sealant conforming to one of the following Federal Specifications: TT-S-00227, TT-S-00230, or TT-S-00153, or other materials approved by the Building Official.	✔	✔	✔
EXTERIOR DOORS			
Doors other than as described in this section shall have a laboratory sound transmission class rating of at least STC_____ **OR;** comply with following options:	33	33	26
1. Double door construction is required for all hinged door openings to the exterior. Such doors shall be side hinged and shall be solid core wood or insulated hollow metal at least one and three-fourths inch (1-3/4") thick separated by an airspace of at least three inches (3") from another door, which can be a storm door. Both doors shall be tightly fitted and weather-stripped.	✔	✔	n/a
2. All exterior side hinged doors shall be solid core wood or insulated hollow metal at least 1- 3/4" thick, and shall be fully weatherstripped.	n/a	n/a	✔
3. The glass of double glazed sliding doors shall be separated by a minimum one-half inch (1/2") airspace. Each sliding frame shall be provided with an efficiently airtight weather-stripping that is compressed airtight when the door is closed so as to conform to an air infiltration test not to exceed one-half (1/2) cubic foot per minute per foot of crack length in accordance with ASTM E-283-65-T.	✔	✔	✔
4. Glass, over two (2) square feet in area, of all doors, shall be at least three-sixteenths (3/16") thick. Glass of double sliding doors shall not be of equal thickness.	✔	✔	✔
5. The perimeter of door frames shall be sealed airtight to the exterior wall construction with a sealant conforming to one of the following Federal Specifications: TT-S-00227, TT-S-00230, or TT-S-00153, or other materials approved by the Building Official.	✔	✔	✔
6. Glass in doors shall be sealed in an airtight non-hardening sealant or in a soft elastomer gasket or gasket tape.	✔	✔	✔

AIRPORT NOISE REDUCTION - Minimum design requirements	**Zone 1 35 dB**	**Zone 2 30 dB**	**Zone 3 25 dB**
VENTILATION			
A Ventilation system shall be installed that will provide the minimum air circulation and fresh air supply requirements for various uses in occupied rooms without the need to open any windows, doors or other openings to the exterior as required by the Washignton State Ventilation and Indoor Air Quality Code. The following items shall be included:	✔	✔	✔
1. Inlet and discharge openings shall be fitted with sheet metal transfer ducts of at least twenty (20) gauge steel, which shall be lined with one inch (1") thick coated glass fiber, and shall be at least five feet (5') long with one (1) ninety degree bend.	✔	✔	✔
2. Gravity vent openings in attics shall be as close to code minimum in number and size, as practical.	✔	✔	✔
2.1 The openings shall be fitted with transfer ducts at least ____ feet in length containing internal one inch (1") thick coated fiber glass sound-absorbing duct lining. Each duct shall have a lined ninety degree bend in the duct such that there is no direct line of sight from the exterior through the duct into the attic.	6	3	n/a
3. Bathroom, laundry and similar exhaust ducts connecting interior space to the outside, shall contain at least a 10 foot length of internal sound absorbing duct lining. Exhaust ducts less than 10 feet in length shall be fully lined and shall also meet the provisions of proper sealing of air leakage from the structure with approved weatherstripping and caulking compounds. Each duct shall be provided with a lined 90 degree bend in the duct such that there is no direct line-of-sight through the duct from the venting cross-section to the room opening cross-section. Duct lining shall be coated glass fiber duct liner at least 1" thick.	✔	✔	✔
4. Domestic range exhaust ducts connecting the interior space to the outdoors shall contain a self-closing damper across the exterior termination that allows for proper ventilation. The duct shall be provided with a 90 degree bend.	✔	✔	✔
AIR LEAKAGE			
The following locations shall be sealed, caulked, gasketed, or weatherstripped to limit or eliminate air leakage; 1. Exterior joints around window and door frames, between the window or door frame and the framing members. 2. Openings between walls and foundations. Between the wall sole plate and the rough flooring. Between the wall panels at corners. Openings at penetrations of utility services through walls, floor, and roofs. All other such openings in the building envelope. 3. All other openings not specifically addressed shall be designed to limit sound transmission and shall have the same average STC as required for doors.	✔	✔	✔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DES MOINES MEMORIAL DR S
24 AVE S
21ST AVE SW
19TH AVE SW
16TH AVE SW
14TH AVE SW
MAPLEWILD AVE SW
SYLVESTER RD SW
MARINE VIEW DR SW
1 AVE S
8 AVE S
16 AVE
INTERNATIONAL BLVD
SW NORMANDY RD
Seattle
Normandy Park
Des Moines
BURIEN
PUGET SOUND
Airport Noise Reduction Area
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